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I, JULIE BILLINGSLEY, TEAM LEADER EXAMINATION SUPPORT AND  
SALES hereby certify that annexed is a true copy of the Provisional specification  
in connection with Application No. 2003902027 for a patent by LOKAWAY  
PTY. LTD. as filed on 30 April 2003.



WITNESS my hand this  
Twenty-second day of October 2003

*J. Billingsley*

JULIE BILLINGSLEY  
TEAM LEADER EXAMINATION  
SUPPORT AND SALES

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**LOKAWAY PTY. LTD.**

**A U S T R A L I A**  
**Patents Act 1990**

**PROVISIONAL SPECIFICATION**  
for the invention entitled:

**"SECURITY DOOR AND FRAME"**

The invention is described in the following statement:

**TITLE: SECURITY DOOR AND FRAME**

**FIELD OF THE INVENTION**

5 This invention concerns door and frame constructions.

## **BACKGROUND OF THE INVENTION**

In our co-pending application no. 2002951987 we describe security door and frame constructions. The purpose of this specification is to expand that disclosure by  
5 describing variants and improvements.

The doors of safes are commonly the subject of attack by unauthorised safe breachers. In particular, any sites which would admit the edge of a prying bar are certain to be investigated. In order to keep the safe as light as possible for carriage and installation,  
10 the gauge of steel is minimised. The door must be as resistant as possible to distortion by prying.

## **SUMMARY OF THE INVENTION**

- 15 This invention provides the feature that the door frame has a frame rail behind the top edge and bottom edges of the rear face of the door, each rail has a slot means and the corresponding area on the rear face of the door have hook means for engaging and disengaging when the door closes and opens.
- 20 This invention also provides the feature that the upright edges of the door frame may be made of channel section stiles and an adjacent parallel L-section member fixed to the body defined with one of the stiles, a slot for the door. An adjacent parallel L-section member fixed to the body adjacent the door hinge stile may act as a hinge support.

This invention also provides the feature that the L-section members together with the channel section stiles simulate a box-section frame. In this version, the hinges are behind the door and therefore not accessible. It is possible to place the hinges outside the door.

- 5 This invention also provides the feature that the throw of the hinge is increased.

This invention further provides the feature that because the first pair of hinges is connected to the door, the second pair of hinges is connected to the body and the third pair is connected to both pairs and the assembly is stabilised by a mutual axial connection  
10 between the members of the first pair and by mutual axial connection between the members of the intermediate pair.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

- 15 Certain embodiment improvements are now described with reference to the accompanying drawings in which:-

Figure 1 is a front view of the upper part of a safe with the door open.

- 20 Figure 2 is a plan of the safe shown in Figure 1.

Figure 3 is a diagrammatic plan with the internal mounts for the hinges.

Figure 4 is a diagrammatic plan with a safe with a boxed hinge.

Figure 5 is a front view of the safe shown in Figure 4 with the box removed but indicated in broken lines.

Figure 6 is a front view of a double hinge layout.

5

Figure 7 is a front view of a triple hinge layout.

#### **DETAILED DESCRIPTION WITH RESPECT TO THE DRAWINGS**

- 10 Referring now to Figures 1, 2 and 6, flange 20 is welded to the top 8 of the safe and the ends 50 are welded to the sides 2. A corresponding flange (not shown) is welded to the floor. The door 16 is mounted as described in our co-pending application no. 2002951987 with a hinge assembly as shown in Figure 6. Flange 20 has a pair of through slots 52. The door has a pair of hooks 54 at the same spacing. The floor flange
- 15 and the corresponding part of the door has an identical construction. The hooks engage and disengage as the door closes and opens. The ends 56 of the flanges 20 are welded to the body of the safe. The flanges resist jacking forces between the uprights which would otherwise tend to pull the door out of its slot 14.
- 20 In Figure 3, the hinges are not mounted on the recessed flanges but are welded to the upright edge of the steel angle member 58. The edge of the door projects into the box space 60. The slot for the reception of the door is defined by the channel formation and the adjacent steel angle 62 welded to the body of the safe. The hinge assembly 24, 28 depends from steel angle 64 welded to the body of the safe.

In Figure 4 and 5 hinge 22 and its counterpart (not shown) is welded to the body of the same (see Figure 6). Hinge 26 and its counterpart would be exposed on the outside of the door if it were not for the steel channel 66 welded to the face of the door. The channel forms a hinge box with the door.

5

Referring now to Figure 6, the static hinge 24 and counterpart 22 each have a projecting pin 22p, 24p which both lie on the same axis as rod 32. Rod 32 connects hinge 28 to counterpart 26. Hinge 28 has upstanding pin 28p and counterpart 26 has upstanding pin 26p. The common axis of pins 26p, 28p is parallel to the axis of rod 32. Hinges 26 and

10 28 serve both the safe body and the door 16.

Static hinges 22 and 24 are welded to the body of the safe as an assembly together with rod 32 and hinges 26 and 28. The door has a pair of hinge leaves 26l and 28l which engage the pins 26p and 28p. The door is free to rotate on pins 26p and 28p in an opening and closing action. The door together with hinges 26 and 28 is free to swing about the axis of rod 32 and slide in and out of the keeper slot 14.

15

Figure 7 shows the connections between three pairs of hinges. The intermediate pair 70, 72 are joined by rod 74. This gives a larger offset motion but otherwise works in the same manner as the arrangement shown in Figure 6.

20

The claims, illustrations, photographs and drawings, if any, form part of the disclosure of this specification as does the description, claims, illustrations, photographs and drawings of any associated provisional or parent specification or of any priority

document, if any, all of which are imported hereinto as part of the record hereof.

Finally it is to be understood that various alterations, modifications and/or additions may be incorporated into the various constructions and arrangements or parts without  
5 departing from the spirit and ambit of the invention.

Dated this 29<sup>th</sup> day of April, 2003.

**SANDERCOCK & COWIE**  
10 **PATENT ATTORNEYS FOR**  
**LOKAWAY PTY. LTD.**



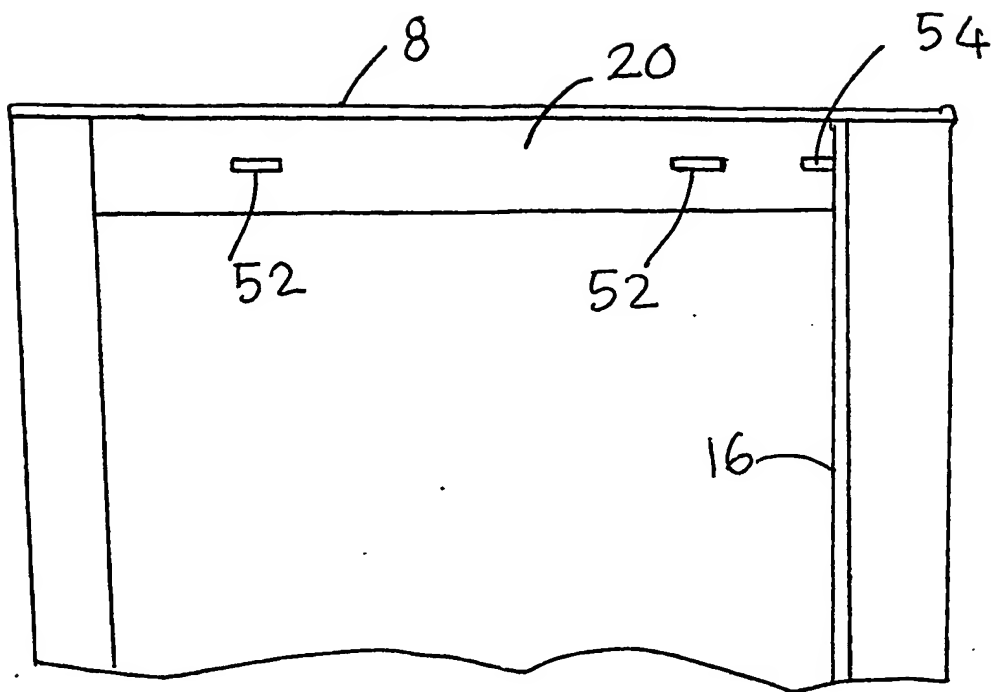


FIG 1

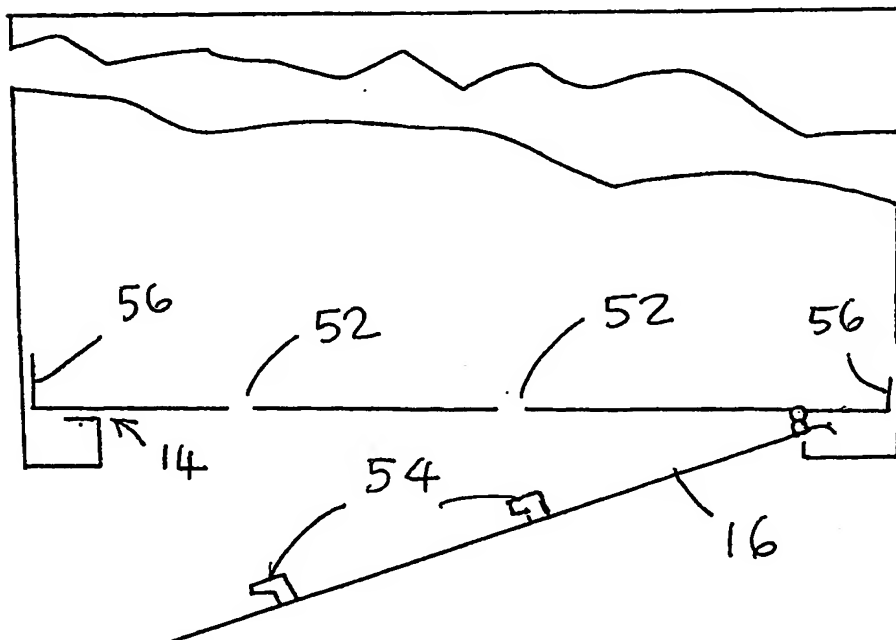


FIG 2

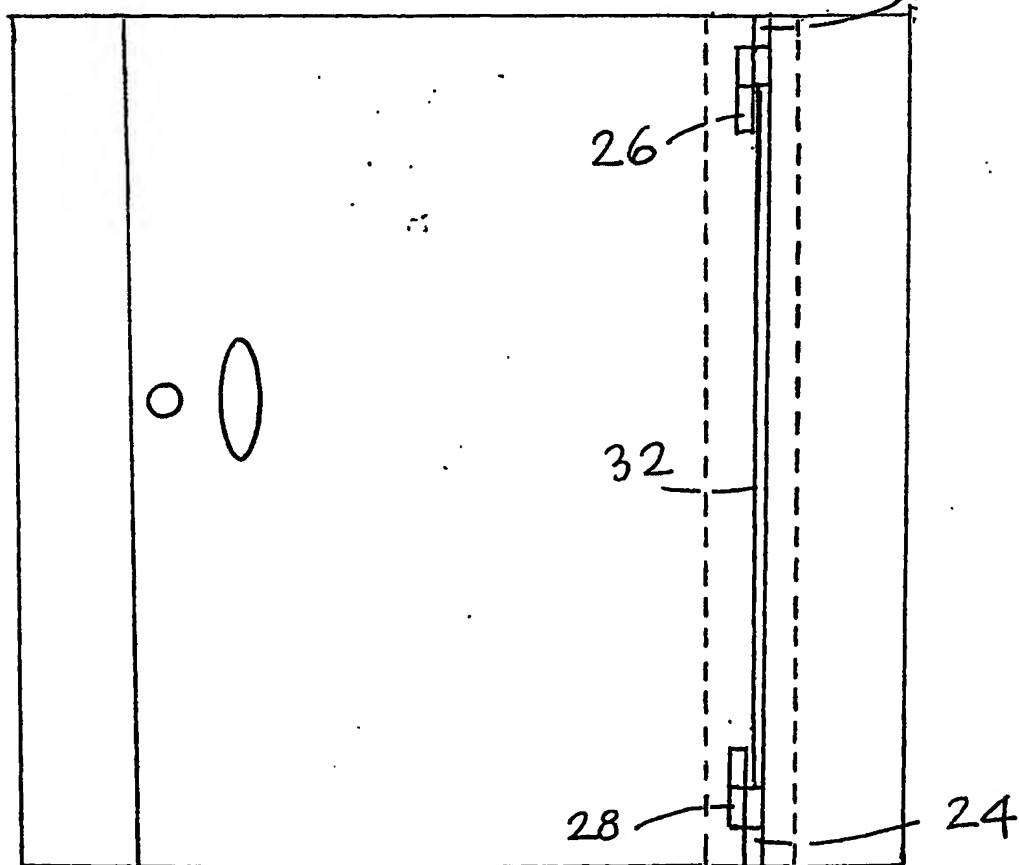
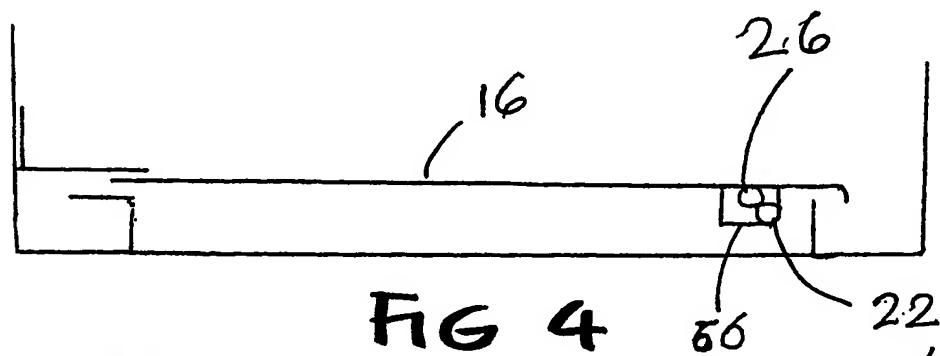
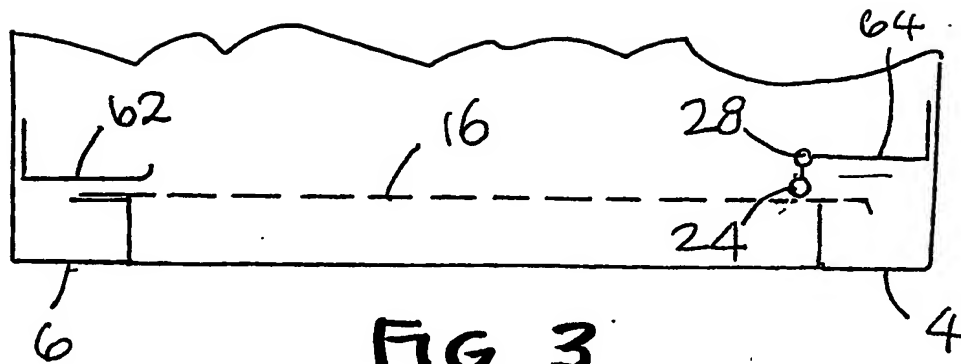


FIG 5

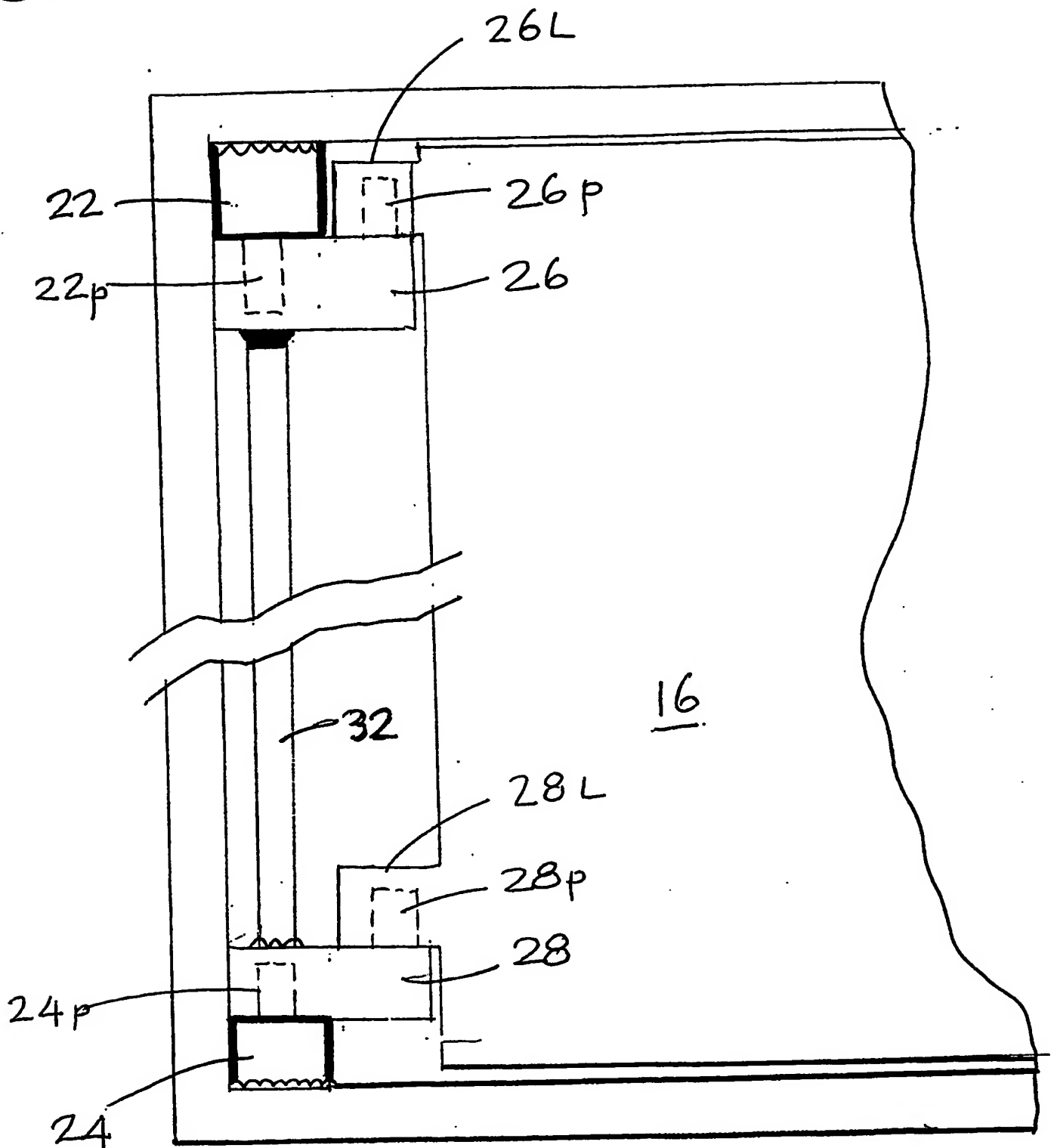
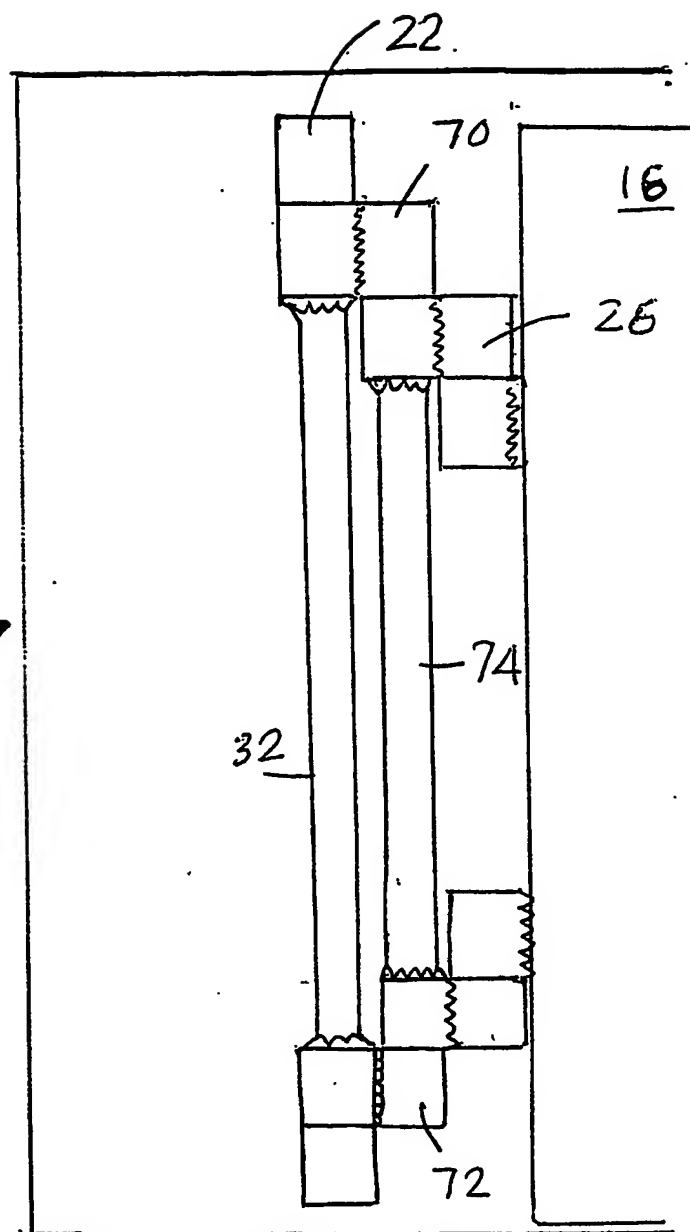


FIG 6

FIG 7



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